PROBLEMS DURING GESTATION AND PREGNANCY RESULTS IN EMPLOYED AND UNEMPLOYED WOMEN : AN INVESTIGATION IN WOMEN WHO GAVE BIRTH IN THREE MATERNAL HOSPITALS IN ANKARA

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SUMMARY :

Purpose: *The objective of this study was to compare employed and unemployed women on the basis of medical problems, length of gestation, mode of delivery, and infant birth weight relevant to their most recent pregnancy.* ***Method:*** *The study was conducted from August through October 1995 at three hospitals in Ankara. We collected data from 150 employed women who worked during pregnancy and from 150 unemployed women. Each woman was interviewed personally using a standardized questionnaire, and responses were recorded by the interviewer. The questions included the women's social, demographic, and employment details where applicable, as well as medical problems experienced during pregnancy and pregnancy term.* ***Results:*** *Unemployed housewifes reported doing more housework while pregnant compared to working women. Working women had more vaginal bleeding during the first trimester of pregnancy. Working women developed more medical problems that involved risk of abortion, but the two groups were similar with regard to frequency of premature labor, mode of delivery, reaching full term pregnancy, and newborn birth weights.* ***Conclusion:*** *Working outside during the first three months of pregnancy adds some burdens to the pregnancy. The underlying causes should be investigated with studies planned more broadly in scope.*

Key Words: *Employed Women, Unemployed Women, Pregnancy Complaints, Pregnancy Results.*

INTRODUCTION

The number of women in the workforce continues to grow, and women are playing ever larger roles in the economic, as well as social life throughout the world. In Turkey, the number of women working outside the home rises daily, with the result that their stronger social presence and professional growth is having positive effects on women as a group, and on society as a whole. Investigations have shown that women who work outside the home are healthier, socially and economically more active, but also less fertile (1).

The traditional, and perhaps more conservative, view of women focuses on their maternal activities, the bearing and raising of children. Studies indicate that women still do most of the housework, both in developing and more industrialized countries, regardless of whether they are pregnant or employed outside the house (1).

Many investigations have observed that working outside the home during pregnancy is associated with a potential risk of premature birth and intrauterine growth retardation (2). Some studies on the length of pregnancy and newborn

birth weight in working and unemployed mothers have demonstrated that women in the workforce have more premature births and tend to have babies of lower birth weight than those who are not employed (1-4). In contrast, however, other reports have indicated that these two groups of women are similar with regard to premature births and low-birth weight babies (5,6). The aim of this study was to compare employed and unemployed women on the basis of medical problems, length of gestation, mode of delivery and newborn birth weight relevant to their most recent pregnancy.

MATERIALS AND METHODS

The study involved 300 women who gave birth from August through October 1995 at three major hospitals in Ankara, Turkey, namely Zekai Tahir Burak Maternity, Etlik Maternity, and SSK Telsizler Maternity Hospital. The group consisted of 150 employed women who were free of chronic disease at conception and who worked during pregnancy, in addition to 150 unemployed women who were of the same health status and did not work outside the home during pregnancy. The two groups were matched for duration of marriage, total number of pregnancies, total number of abortions, total number of stillbirths, and total number of live births followed by death in infancy (Table 1). Also, to ensure that the socioeconomic characteristics of the two groups were comparable, we included only women who lived in Ankara, had attended at least four prenatal visits at the same hospital, and had delivered at that same hospital.

The women were interviewed in person within 24-48 hours of their baby's birth, using a survey comprised of 36 questions. The questions covered the women's social, demographic, and employment details where applicable, as well as medical problems experienced during pregnancy and term. A baby birth weight below 2.500 grams was classified as low, whereas weight above 2.500 grams was considered normal.

We used the chi-square test for statistical analysis of the collected data, and considered $p<0.05$ as a significant difference. The software program Epi-Info Statistics, Version 6 was used in performing statistical tests.

RESULTS

The employed women had a significantly higher level of education ($p<0.05$) and were significantly older than their unemployed counterparts (mean ages 28.20 ± 4.60 and 23.93 ± 4.29 years, respectively; $p<0.05$) In describing the nature of their households, 81.3% of employed women and 71.3% of unemployed women stated that they lived with their immediate family.

Table 2 lists some of the relevant features of the employed women's work situations. The majority reported that they work in the public sector (64.7%). When asked about working conditions, 66.7% stated that their jobs involved standing virtually all day, and 60% said that they felt physically and mentally fatigued after work. A total of 92.7% reported that their work provided social security or health insurance coverage. In this group, 65.4% reported that they had a 7- to 8-hour work day, 78% said they worked 5 days a week, and 28% stated that they worked during statutory holidays.

Table 3 summarizes some details about the type and amount of housework done by the two groups of women. A total of 74.7% of the employed women said they do all the laundry, 73.4% all the dishewashing, 66.7% all the housekeeping, and 77.3% all the cooking. The corresponding percentages of unemployed women who said they were the primary person

Table 1: Details of the women's fertility histories, Ankara, 1995.

	Unemployed (n=150)		Employed (n=150)		
	Mean	SD	Mean	SD	p
Duration of Marriage	5.273	4.84	5.207	3.89	>0.05
Number of Pregnancies	2.380	1.48	2.247	1.36	>0.05
Number Of Abortions	0.207	0.49	0.173	0.43	>0.05
Number of Stillbirths	0.053	0.28	0.033	0.18	>0.05
Number of Live Births Followed by Death in Infancy	0.067	0.32	0.093	0.31	>0.05

Table 2: Relevant job-related details and health issues in the employed group, Ankara, 1995.

Job Details		No.	%
Sector	Public	97	64.7
	Private	42	28.0
	Self-employed	11	7.3
Social Security Benefits	Yes	139	92.7
	No	11	7.3
Working Conditions	Sitting	50	33.3
	Standing	100	66.7
Fatigue at Day's End	Physical	47	31.3
	Mental	3	6.7
	Physical+Mental	90	60.0
	None	10	6.7

Table 3: Types and amounts of housework done by each group, Ankara, 1995.

	Employed (n=150)		Unemployed (n=150)	
Work Type	No.	%	No	%
Laundry				
All	112	74.7	116	77.4
None	12	8.0	2	1.3
Some	26	17.3	32	21.3
			χ^2=7.83	p=0.019
Dishewashing				
All	110	73.4	117	78.0
None	14	9.3	1	0.7
Some	26	17.3	32	21.3
			χ^2=12.10	p=0.002
Housekeeping				
All	100	66.7	116	77.3
None	25	16.7	1	0.7
Some	25	16.6	33	22.0
			χ^2=24.44	p=0.000004
Cooking				
All	116	77.3	116	77.3
None	10	6.7	2	1.3
Some	24	16.0	32	21.4
			χ^2=6.48	p=0.039

doing these tasks were 77.4%, 78.0%, 77.3%, and 77.3%. When the two groups were compared on the basis of each of these jobs, there were statistical differences between them (all p values<0.05).

Table 4 shows the distribution of complaints or findings during pregnancy listed according to trimester. There were no statistical differences between the employed and unemployed women with regard to incidence of severe nausea, high blood pressure, development of varicose veins, premature contractions, and urinary tract infections (all p values>0.05). The employed women experienced more bleeding in the first trimester (p<0.05).

Table 5 summarizes the results for the occurrence of health problems associated with abortion risk and the occurrence of premature labor. Working women experienced significantly more medical problems that involved risk of abortion than their unemployed counterparts (20.7% versus 8.0%, respectively; p<0.05). The corresponding frequencies of early labor in the two groups were similar, at 16.0% and 13.3%, respectively (p>0.05).

Table 6 presents the data on mode of delivery, pregnancy term, and baby birth weights. Cesarean section was performed in 20.7% of the employed women and 12.7% of the unemployed women, thus mode of delivery was similar in the

Table 4: Distribution of medical complaints or findings according to trimester, Ankara, 1995.

		Employed (n=150)		Unemployed (n=150)			
Complaint	Trimester	No	%	No	%	$\chi 2$	P
Severe Nausea	1	78	52.0	70	46.7	0.85	0.35
	2	11	7.3	16	10.7	0.65	0.41
	3	2	1.3	8	5.3	2.59	0.10
Bleeding	1	25	16.7	11	7.3	5.33	0.02
	2	9	6.0	4	2.7	1.29	0.25
	3	8	5.3	8	5.3	0.07	0.79
High Blood Pressure	1	-	-	1	0.7	*	1
	2	2	1.3	1	0.7	*	1
	3	10	6.7	7	4.70	0.25	0.61
Varicose Veins	1	2	1.3	3	2.0	**	1
	2	8	5.3	8	5.3	0.07	0.79
	3	26	17.3	14	9.3	3.49	0.06
Premature Contractions	1	4	2.7	1	0.7	*	0.37
	2	4	2.7	4	2.7	*	1
	3	20	13.3	19	12.7	0	1
Urinary Tract Infection	1	16	10.7	13	8.7	0.18	0.69
	2	16	10.7	18	12.0	0.03	0.85
	3	18	12.0	20	13.3	0.03	0.86

* Fisher's exact chi-square test

Table 5: Distribution of frequencies of encountering abortion risk and of premature labor, Ankara, 1995.

Condition Experienced	Employed (n=150) No.	%	Unemployed (n=150) No.	%	Total (n=300) No.	%	
Risk of Abortion							
Yes	31	20.7	12	8.0	43	14.3	
No	119	79.3	138	92.0	257	85.7	
						χ^2=9.6,	p=0.0019
Premature Labor							
Yes	24	16.0	20	13.3	44	14.7	
No	126	84.0	130	86.7	256	85.3	
						χ^2=0.24,	p=0.624

two groups (p>0.05). Concerning pregnancy term, 12.7% of the working women and 8.0% of housewives had premature babies, but the difference was not statistically significant (p>0.05). A total of 10.0% of the employed and 7.3% of the unemployed women gave birth to low-birth weight babies, but again the difference between the groups was not significant (p>0.05).

DISCUSSION

Analysis of the information collected from these 150 employed and 150 unemployed women revealed some interesting findings. First, we found that working women were of significantly older gestational age. The reason for this may be that these individuals tend to get married and have children later than women who do not work outside the home.

Table 6: Comparison of the length of pregnancy, mode of delivery, and newborn birth weight for the two groups, Ankara, 1995.

Characteristic	Employed (n=150)		Unemployed (n=150)		Total (n=300)	
	No.	%	No.	%	No.	%
Mode of Delivery						
Vaginal	119	79.3	131	87.3	250	83.3
Cesarean	31	20.7	19	12.7	50	16.7
					χ^2= 2.90	p=0.088
Length of Pregnancy						
Term	131	87.3	138	92.0	269	89.6
Preterm	19	12.7	12	8.0	31	10.4
					χ^2=1.30,	p=0.25
Baby's Birth Weight						
Normal	135	90.0	139	92.7	274	91.4
Low	15	10.0	11	7.3	26	8.6
					χ^2=0.38,	p=0.538

In addition to age differences, we found that working women in our study did less housework than their unemployed counterparts. This implies that women who work outside the home get help with jobs around the house.

When we examined the women's pregnancy-related complaints during each trimester, we found the two groups to be similar with regard to incidence of severe nausea, high blood pressure, development of varicose veins, premature contractions, and urinary tract infection. The working women reported more first-trimester bleeding. The increased incidence of bleeding in employed women is probably due to this group's higher level of physical activity, which is also considered to raise the risk of abortion in these women.

As noted above, 20.7% of the working women and 8.0% of the unemployed group encountered risk of abortion during their pregnancy, and this difference was statistically significant. Although the same trend held for premature labor, there was no statistical difference between the groups in this case. As previously mentioned, the higher level of activity in employed women may explain the increased risk of spontaneous abortion in this group, but various studies on this subject have yielded conflicting results. A 1972 report from Germany revealed no differences between employed and unemployed women with regard to abortion, whereas a study on data collected in Finland between 1974 and 1977 showed that working women there have more spontaneous abortions (6).

Our results indicated that unemployed and employed women were similar in terms of both mode of delivery and premature births, though there was a trend toward increased preterm deliveries in working women (rates for the latter being 12.7% and 8.0%, respectively). Similar to the situation with abortion risk, the literature contains conflicting reports on the preterm delivery issue. Some investigations have shown that working women have significantly more premature babies than unemployed women, others have revealed no statistical differences between the two groups, and still others have demonstrated a lower rate of preterm deliveries in employed women (1, 2, 6-8).

Our analysis of the birth weight data indicated that employed and unemployed women were similar in this respect as well, with a trend toward below-normal weights in the working women's babies (low-birth weight rates 10.0% and 7.3%, respectively). As in the situation described above, some studies have yielded similar results, other work has shown that employed women have significantly more low-birth weight babies, and yet another report from Britain has stated that working women have fewer low-birth weight babies (1, 2, 5-7).

We found in our study population that housewives do more housework during their pregnancies than their employed counterparts do. However, we also noted that employed women

have a higher risk of vaginal bleeding and abortion during the first trimester of pregnancy than that of unemployed housewives. These results suggested that working conditions of employed women should be ameliorated and some burdens of outside working should be alleviated. In contrast, employment status of the women during pregnancy was not found to have any effect on the duration of pregnancy and newborn birth weight. In this study, the factors that may influence them were matched between employed and unemployed women groups, thus enhancing the reliability of the results on the matter.

In conclusion, from the results of this study, we would like to emphasize again that working outside during the first three months of the pregnancy adds some burdens to the pregnancy. The underlying causes for that should be investigated with studies planned more broadly in scope.

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